

Service Manual



GM-3100T/XU/EW

ORDER NO.
CRT3368

BRIDGEABLE TWO-CHANNEL POWER AMPLIFIER

GM-3100T /XU/EW

GM-3100T /XU/UC

GM-3100T /XU/ES

GM-3100T /XU/CN



For details, refer to "Important check points for good servicing".

PIONEER CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O.Box 1760, Long Beach, CA 90801-1760 U.S.A.
PIONEER EUROPE NV Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE.LTD. 253 Alexandra Road, #04-01, Singapore 159936

SAFETY INFORMATION

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

● Service Precaution



You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety



Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

- ① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

- ② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification (addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

- ③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

- ④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

- ⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

- ⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

- ⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

- ⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

- ⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

- ⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments



To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts



Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning



For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws



To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

A

CONTENTS

SAFETY INFORMATION	2	5. ELECTRICAL PARTS LIST	16
1. SPECIFICATIONS	5	6. ADJUSTMENT	18
2. EXPLODED VIEWS AND PARTS LIST	6	7. GENERAL INFORMATION.....	19
2.1 PACKING	6	7.1 DIAGNOSIS	19
2.2 EXTERIOR	8	7.1.1 DISASSEMBLY	19
3. SCHEMATIC DIAGRAM.....	10	7.1.2 CONNECTOR FUNCTION DESCRIPTION	21
3.1 SCHEMATIC DIAGRAM	10	8. OPERATIONS	22
4. PCB CONNECTION DIAGRAM.....	12		
4.1 AMP UNIT.....	12		

B

C

D

E

F

1. SPECIFICATIONS

Power source	14.4 V DC (10.8 — 15.1 V allowable)
Grounding system	Negative type
Current consumption	15.0 A (at continuous power, 4 Ω)
Backup current	3 mA or less
Average current drawn*	4.0 A (4 Ω for two channels) 7.8 A (4 Ω for one channel)
Fuse	25 A $\times$ 1
Dimensions	300 (W) $\times$ 60 (H) $\times$ 186 (D) mm
Weight	2.7 kg (Leads for wiring not included)
Maximum power output	120 W $\times$ 2 (4 Ω) / 300 W $\times$ 1 (4 Ω)
Continuous power output	60 W $\times$ 2 (at 14.4 V, 4 Ω , 20 Hz — 20 kHz 0.08% THD) 150 W $\times$ 1 (at 14.4 V, 4 Ω , 20 Hz — 20 kHz 0.8% THD) 75 W $\times$ 2 (at 14.4 V, 2 Ω , 20 Hz — 20 kHz 0.8% THD)
Continuous power output (DIN power)	70 W $\times$ 2 (4 Ω) / 200 W $\times$ 1 (4 Ω) (DIN45324, +B=14.4 V)
Load impedance	4 Ω (2 — 8 Ω allowable) (Bridge connection: 4 — 8 Ω allowable)
Frequency response	10 Hz — 50 kHz (+0 dB, -1 dB)
Signal-to-noise ratio	100 dB (IEC-A network)
Distortion	0.008 % (10 W, 1 kHz)
Separation	70 dB (1 kHz)
Low pass filter	Cut off frequency: 80 Hz Cut off slope: -12 dB/oct
Gain control	RCA: 200 mV — 6.5 V Speaker: 0.8 — 26 V
Maximum input level / impedance	RCA: 6.5 V / 22 k Ω Speaker: 26 V / 40 k Ω

Note:

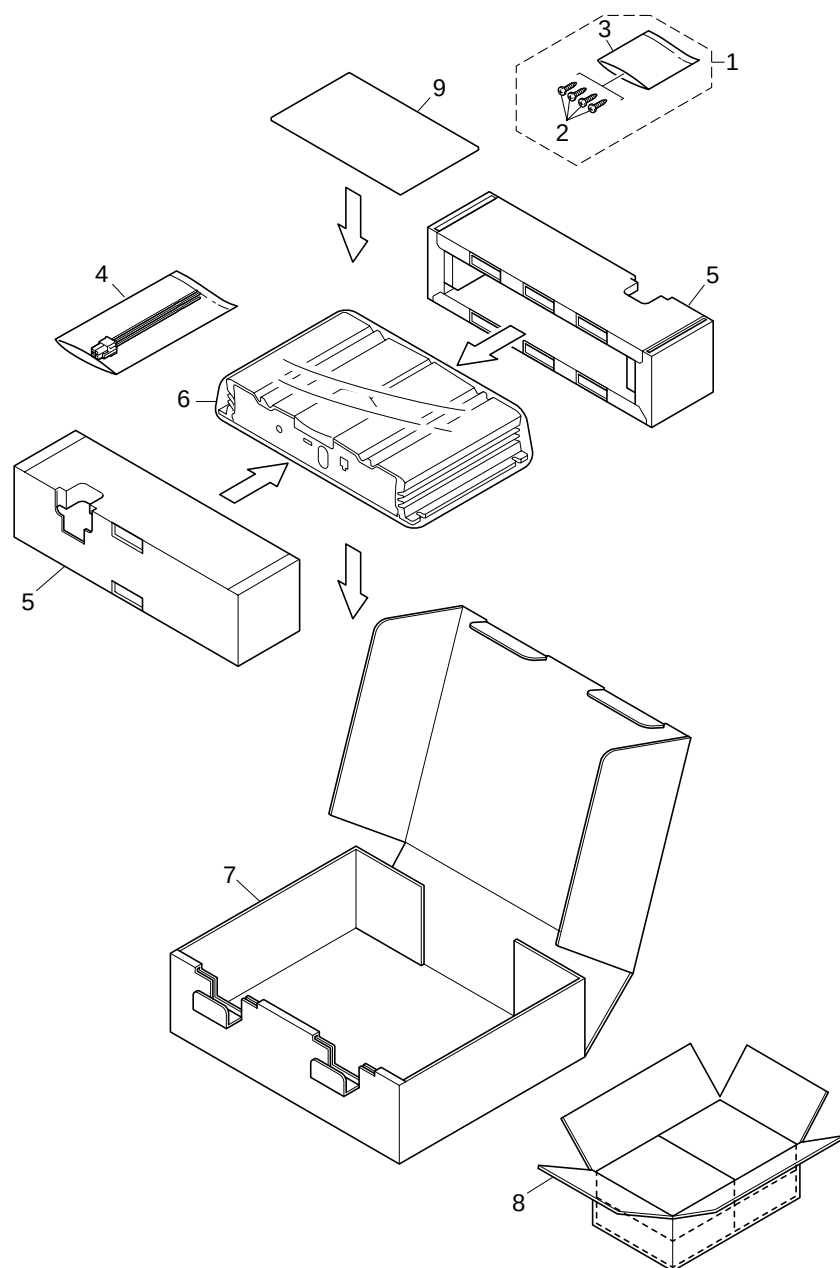
- Specifications and the design are subject to possible modification without notice due to improvements.

*Average current drawn

- The average current drawn is nearly the maximum current drawn by this unit when an audio signal is input. Use this value when working out total current drawn by multiple power amplifiers.

2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING



NOTE:

- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.
- Screws adjacent to ▽ mark on the product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual.
(In the case of no amount instructions, apply as you think it appropriate.)

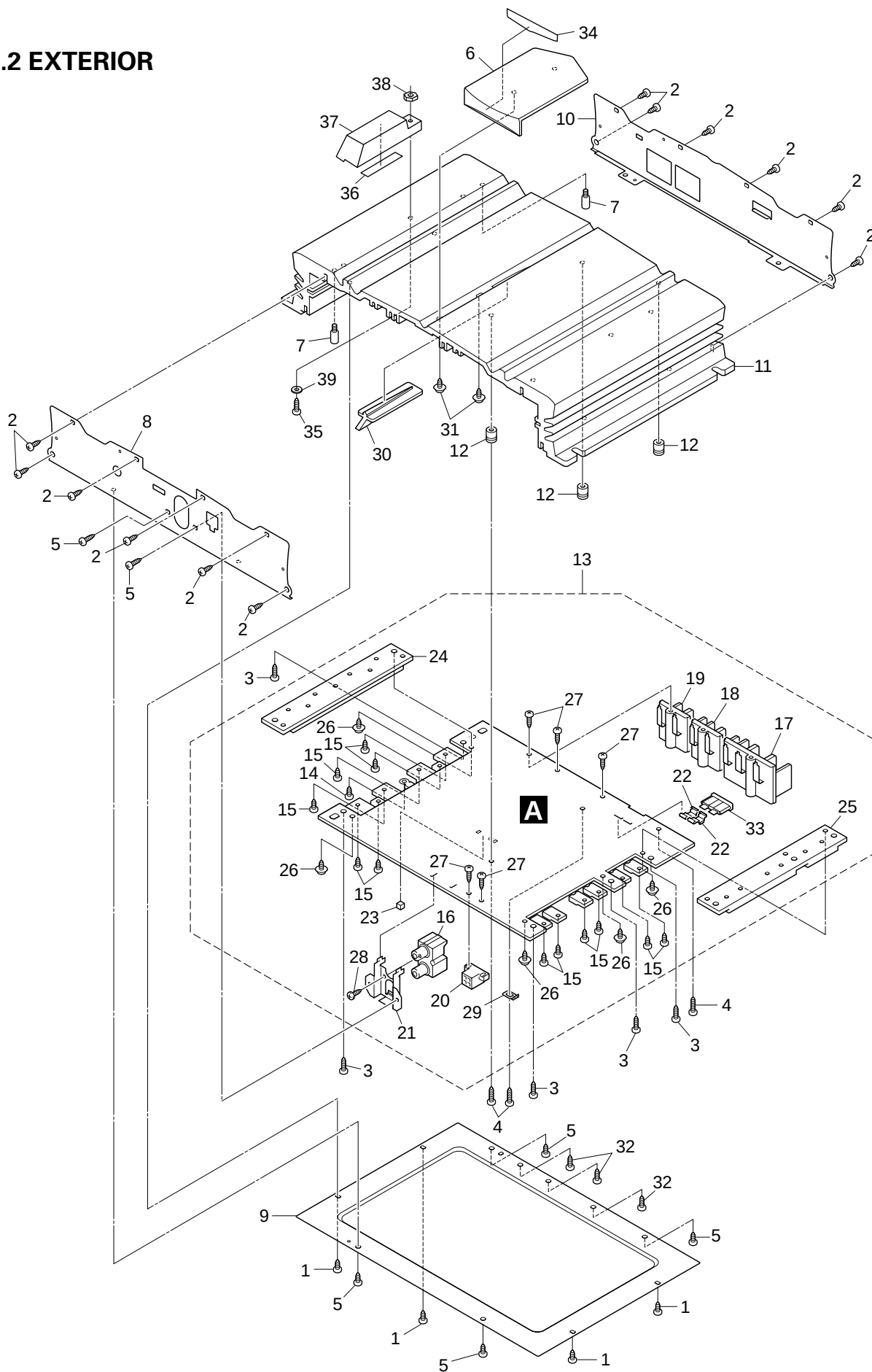
● PACKING SECTION PARTS LIST

Mark No.	Description	Part No.			
		GM-3100T/XU/EW	GM-3100T/XU/UC	GM-3100T/XU/ES	GM-3100T/XU/CN
	1 Screw Assy	CEA4835	CEA4835	CEA4835	CEA4835
	2 Screw	BYC40P180FZK	BYC40P180FZK	BYC40P180FZK	BYC40P180FZK
*	3 Polyethylene Sheet	CNM4338	CNM4338	CNM4338	CNM4338
	4 Cord Assy	CDE7736	CDE7736	CDE7736	CDE7736
	5 Protector	CHP2911	CHP2911	CHP2911	CHP2911
	6 Cover	CEG1057	CEG1181	CEG1057	CEG1057
	7 Carton	CHG5368	CHG5370	CHG5369	CHG5467
	8 Contain Box	CHL5368	CHL5370	CHL5369	CHL5467
	9-1 Owner's Manual	CRD3925	CRD3926	CRD3927	CRB2043
*	9-2 Warranty Card	CRY1157	Not used	Not used	ARY7046
	9-3 Polyethylene Bag	CEG1116	CEG1116	CEG1116	CEG1116
*	9-4 Card	Not used	ARY1048	Not used	Not used
*	9-5 Caution Card	Not used	CRP1324	Not used	Not used
	9-6 Owner's Manual	Not used	Not used	CRD3928	Not used

● Owner's Manual

Part No.	Language
CRD3925	English, Spanish, German, French, Italian, Dutch
CRD3926	English, French, Spanish
CRD3927	English, Spanish
CRD3928	Arabic, Portuguese(B)
CRB2043	Traditional Chinese

2.2 EXTERIOR



● EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BBZ30P060FTC	21	Holder	CND2456
2	Screw	BBZ30P080FZK	22	Terminal	CND2458
3	Screw	BBZ30P100FZK	23	Spacer	CNM9570
4	Screw	BBZ30P120FTC	24	Sub Heat Sink	CNR1780
5	Screw	BSZ30P050FZK	25	Sub Heat Sink	CNR1781
*	6 Badge	See Contrast table(2)	26	Screw	IMS30P050FZK
7	Screw	CBA1810	27	Screw	PPZ30P100FSN
8	Panel	See Contrast table(2)	28	Screw	PPZ30P100FZK
9	Case	CNB3073	29	Terminal(CN903)	VNF1084
10	Panel	See Contrast table(2)	30	Lighting Conductor Unit	CXC4334
11	Heat Sink	See Contrast table(2)	31	Screw	IBZ30P060FTC
12	Spacer	CNV8256	32	Screw	PPZ30P100FZK
13	Amp Unit	CWH1272	⚠ 33	Fuse(FU101)(25A)	CEK1329
14	Screw	BBZ30P060FZK	34	Sheet	CNM9571
15	Screw	BBZ30P080FZK	35	Screw	See Contrast table(2)
16	Pin Jack(CN801)	CKB1068	*	36 Seal	See Contrast table(2)
17	Terminal(CN901)	CKE1055	37	Holder	See Contrast table(2)
18	Terminal(CN905)	CKE1057	38	Nut	See Contrast table(2)
19	Terminal(CN906)	CKE1057	39	Washer	See Contrast table(2)
20	Socket(CN904)	CKM1463			

(2) CONTRAST TABLE

GM-3100T/XU/EW, GM-3100T/XU/UC, GM-3100T/XU/ES and GM-3100T/XU/CN are constructed the same except for the following:

Mark No.	Description	Part No.			
		GM-3100T/XU/EW	GM-3100T/XU/UC	GM-3100T/XU/ES	GM-3100T/XU/CN
*	6 Badge	CAH1919	CAH1919	CAH1916	CAH1916
	8 Panel	CNB3063	CNB3063	CNB3062	CNB3062
	10 Panel	CNB3127	CNB3065	CNB3064	CNB3064
	11 Heat Sink	CNR1789	CNR1801	CNR1768	CNR1768
	35 Screw	Not used	BMZ40P200FZK	Not used	Not used
*	36 Seal	Not used	CAN3984	Not used	Not used
	37 Holder	Not used	CNV8522	Not used	Not used
	38 Nut	Not used	NB40FZK	Not used	Not used
	39 Washer	Not used	WB40FZK	Not used	Not used

3. SCHEMATIC DIAGRAM

3.1 SCHEMATIC DIAGRAM

A

A

AMP UNIT

ISOLATE 0dB

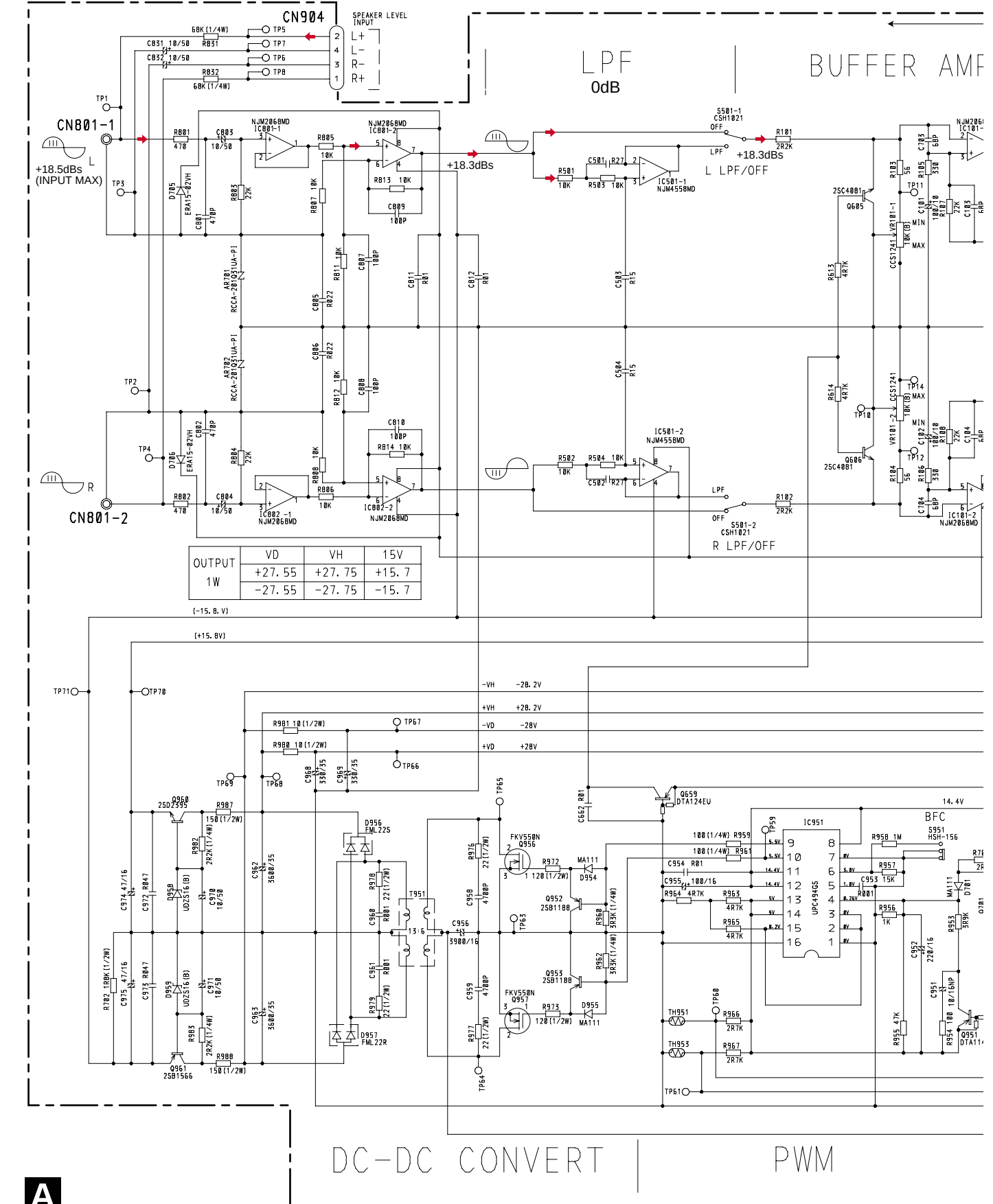
B

C

D

E

F



NOTE :

 Symbol indicates a resistor.

No differentiation is made between chip resistors and discrete resistors.

—||— Symbol indicates a capacitor.

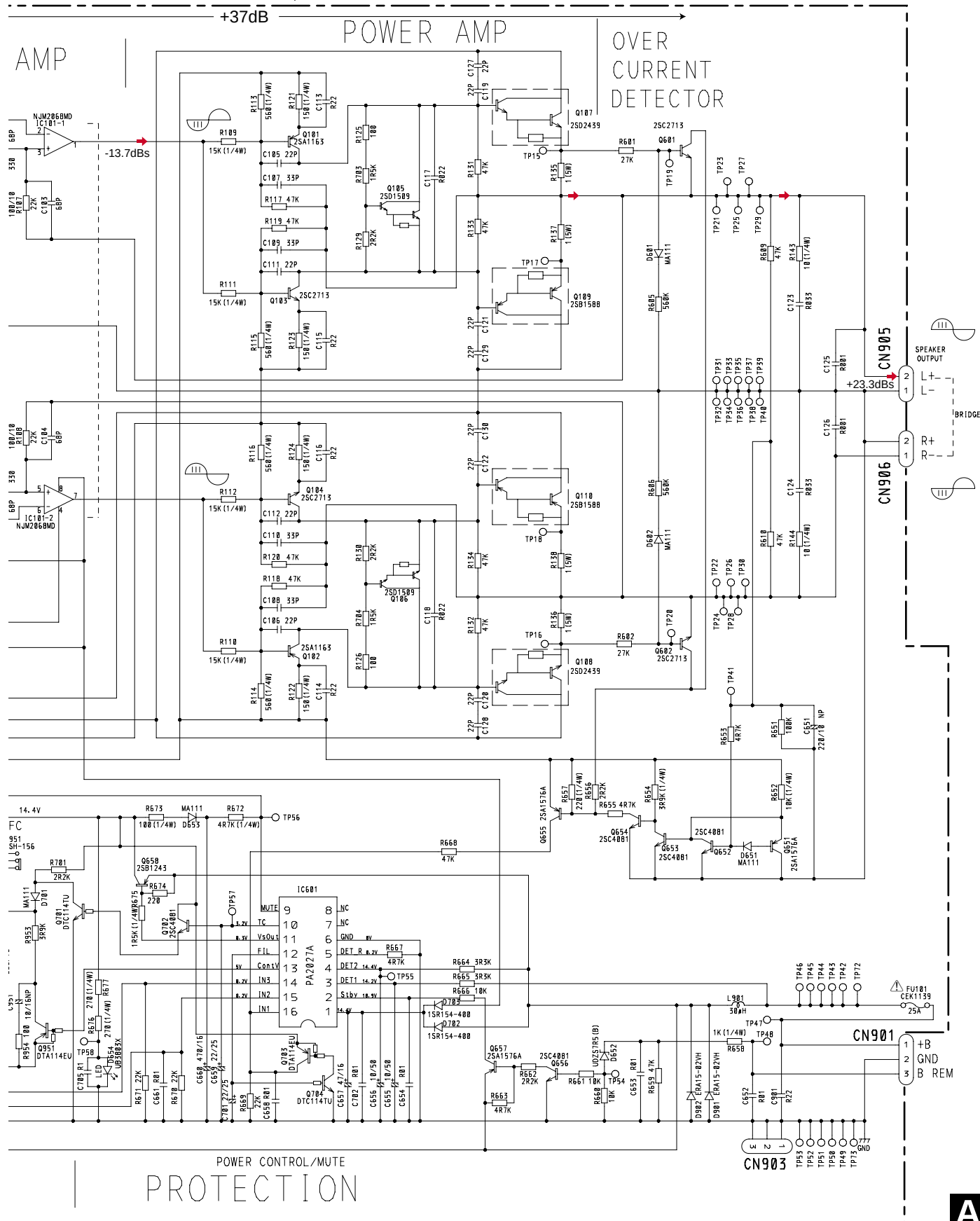
No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as :

2.2 → 2R2

0.022 → R022

The mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.



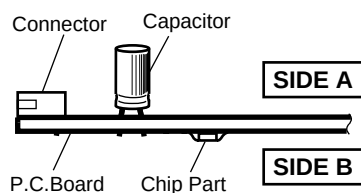
4. PCB CONNECTION DIAGRAM

4.1 AMP UNIT

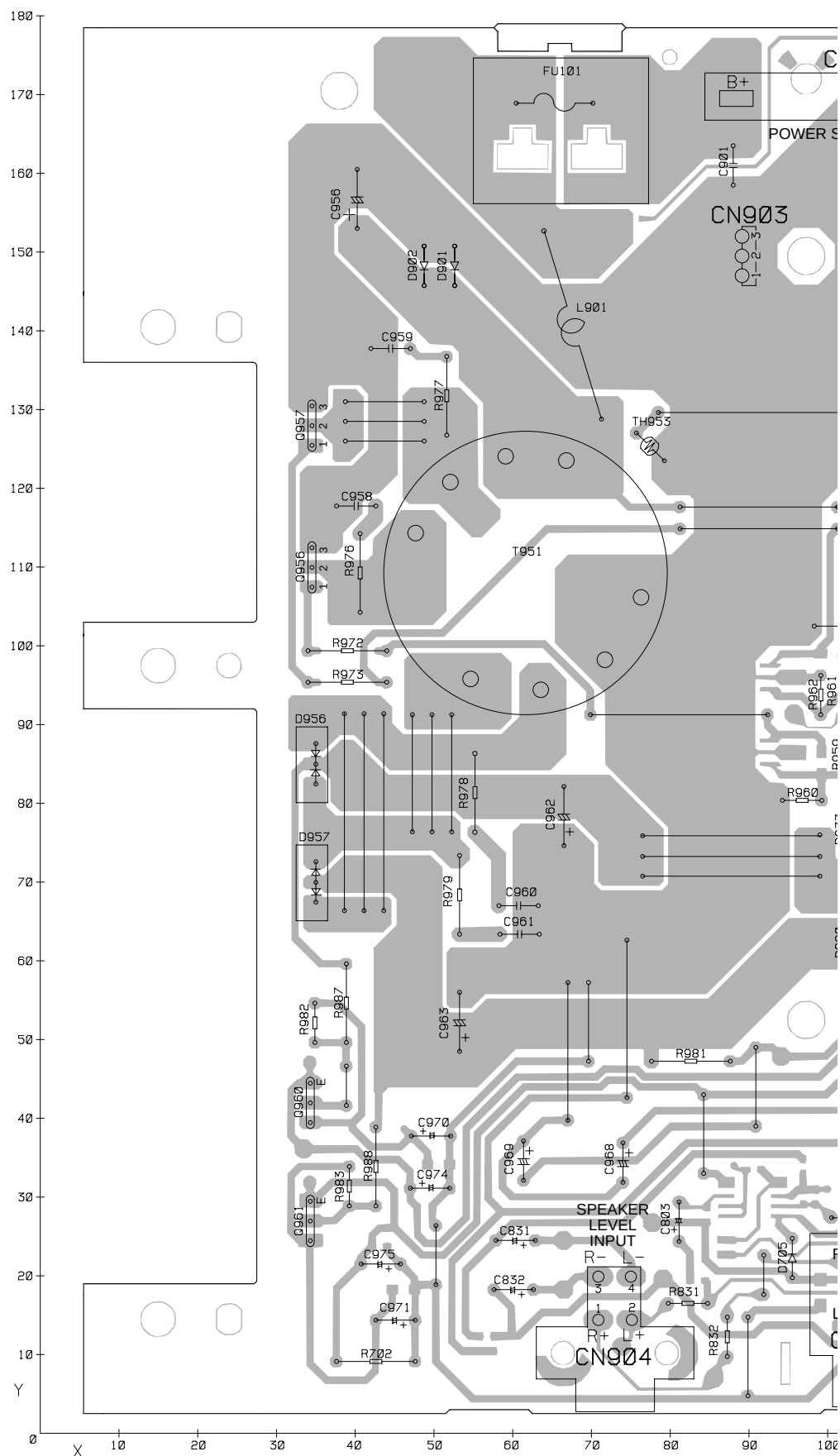
NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination. For further information for respective destinations, be sure to check with the schematic diagram.

2.Viewpoint of PCB diagrams



A AMP UNIT



SIDE A

A

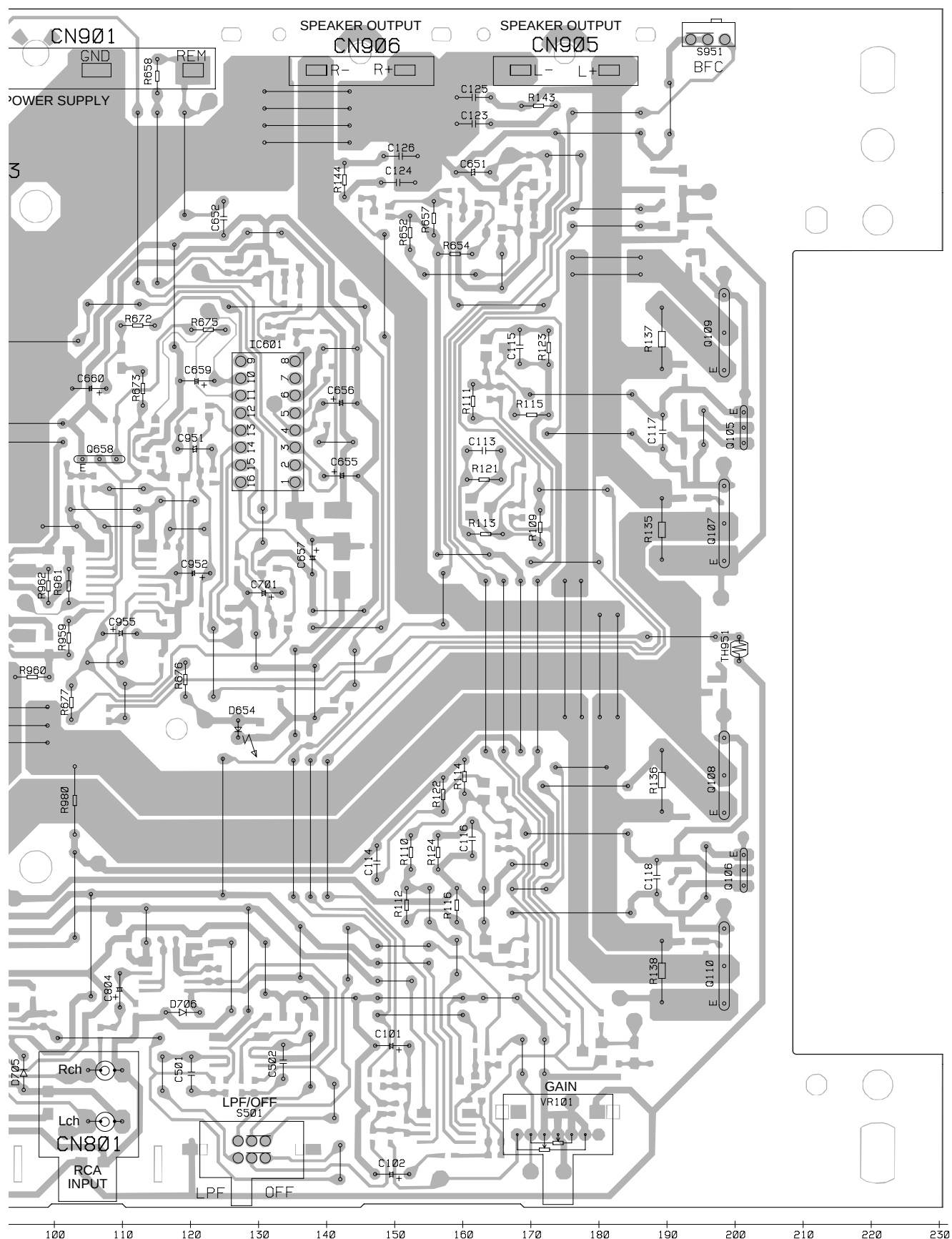
B

C

D

E

F



SIDE B

A

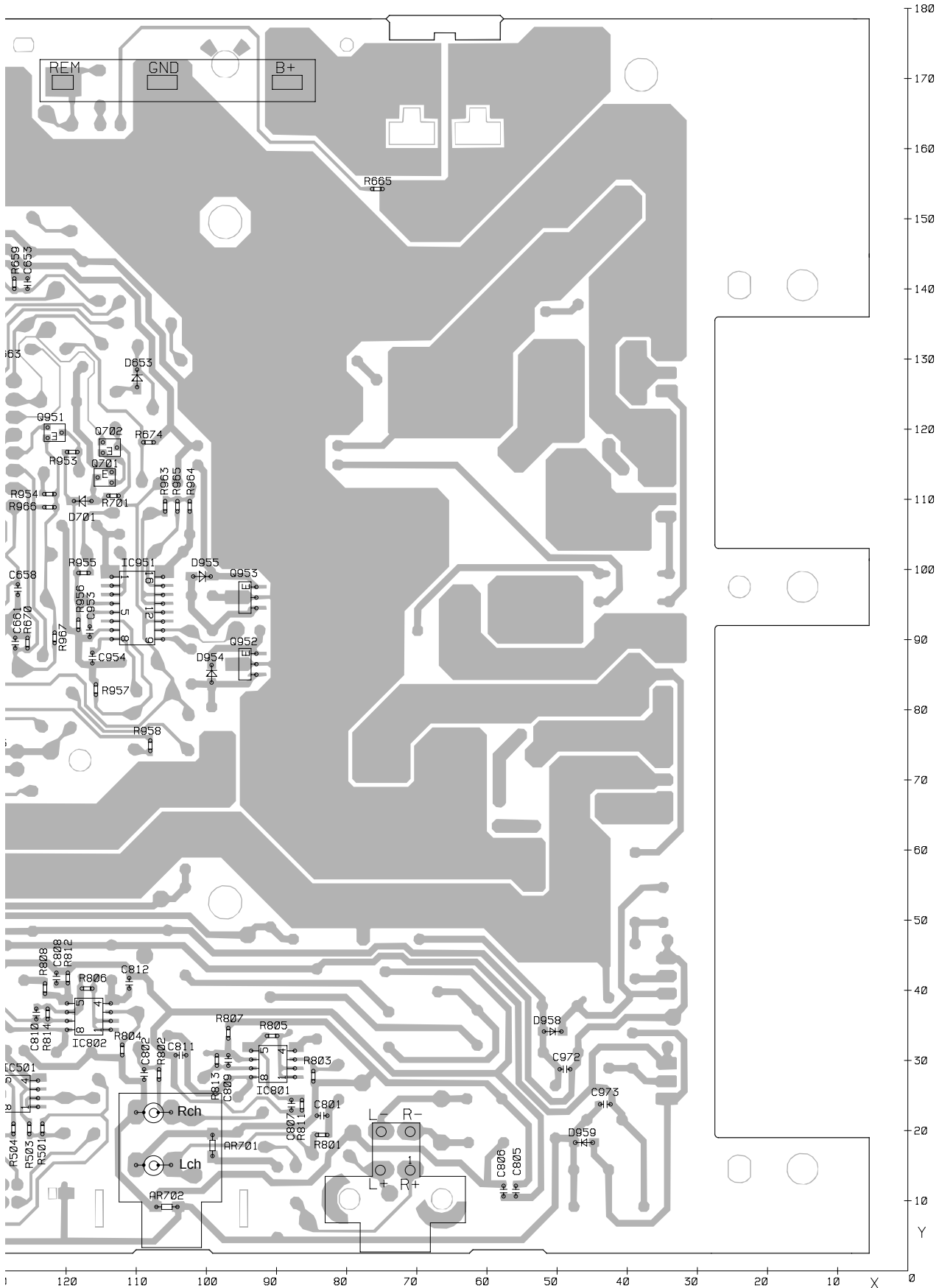
B

C

D

E

F



5. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/○○○○○J,RS1/○○S○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

- The Δ mark found on some component parts indicates the importance of the safety factor of the part.
- Therefore, when replacing, be sure to use parts of identical designation.

Meaning of the figures and others in the parentheses in the parts list.

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding

PC board.

IC 301 (A, 91, 111) IC NJM2068V

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
A Unit Number : CWH1272 Unit Name : Amp Unit		D 654 (A,127,74) LED	UB3803X
MISCELLANEOUS		D 701 (B,118,110) Diode	MA111
IC 101 (B,158,14) IC	NJM2068MD	D 702 (B,139,105) Diode	1SR154-400
IC 501 (B,127,25) IC	NJM4558MD	D 703 (B,142,97) Diode	1SR154-400
IC 601 (A,135,109) IC	PA2027A	D 705 (A,96,20) Diode	ERA15-02VH
IC 801 (B,91,30) IC	NJM2068MD	D 706 (A,116,31) Diode	ERA15-02VH
IC 802 (B,117,36) IC	NJM2068MD	D 901 (A,53,151) Diode	ERA15-02VH
		D 902 (A,49,151) Diode	MA111
		D 954 (B,99,85) Diode	MA111
		D 955 (B,101,99) Diode	MA111
IC 951 (B,110,95) IC	UPC494GS	D 956 (A,35,82) Diode	FML22S
Q 101 (B,163,105) Transistor	2SA1163	D 957 (A,35,67) Diode	FML22R
Q 102 (B,165,64) Transistor	2SA1163	D 958 (B,51,34) Diode	UDZS16(B)
Q 103 (B,165,129) Transistor	2SC2713	D 959 (B,46,18) Diode	UDZS16(B)
Q 104 (B,165,41) Transistor	2SC2713	L 901 (A,68,141) Choke Coil 30μH	CTH1324
Q 105 (A,201,117) Transistor	2SD1509	T 951 (A,62,109) Transformer	CTT1124
Q 106 (A,201,52) Transistor	2SD1509	TH 951 (A,201,83) Thermistor	CCX1013
Q 107 (A,198,108) Transistor	2SD2439	TH 953 (A,79,124) Thermistor	CCX1064
Q 108 (A,198,71) Transistor	2SD2439	S 501 (A,127,10) Switch(LPF/OFF)	CSH1021
Q 109 (A,198,136) Transistor	2SB1588	S 951 (A,199,174) Switch(BFC)	HSH-156
Q 110 (A,198,43) Transistor	2SB1588	VR 101 (A,168,13) Volume 10kΩ(A)(GAIN)	CCS1241
Q 601 (B,191,147) Transistor	2SC2713	Δ FU 101 (A,66,163) Fuse 25A	CEK1329
Q 602 (B,179,25) Transistor	2SC2713	AR 701 (B,99,18) Surge Protector	RCCA-201Q31UA-PI
Q 605 (B,147,17) Transistor	2SC4081	AR 702 (B,106,9) Surge Protector	RCCA-201Q31UA-PI
Q 606 (B,161,21) Transistor	2SC4081		
Q 651 (B,167,150) Transistor	2SA1576A	RESISTORS	
Q 652 (B,169,146) Transistor	2SC4081	R 101 (B,147,13)	RS1/16S222J
Q 653 (B,165,146) Transistor	2SC4081	R 102 (B,164,24)	RS1/16S222J
Q 654 (B,161,149) Transistor	2SC4081	R 103 (B,149,13)	RS1/16S560J
Q 655 (B,148,149) Transistor	2SA1576A	R 104 (B,165,24)	RS1/16S560J
Q 656 (B,135,141) Transistor	2SC4081	R 105 (B,152,21)	RS1/16S331J
Q 657 (B,135,131) Transistor	2SA1576A	R 106 (B,158,10)	RS1/16S331J
Q 658 (A,104,112) Transistor	2SB1243	R 107 (B,148,21)	RS1/16S223J
Q 659 (B,142,76) Transistor	DTA124EU	R 108 (B,165,12)	RS1/16S223J
Q 701 (B,115,113) Transistor	DTC114TU	R 109 (A,171,105)	RD1/4PU153J
Q 702 (B,114,117) Transistor	2SC4081	R 110 (A,152,52)	RD1/4PU153J
Q 703 (B,133,88) Transistor	DTA114EU	R 111 (A,162,118)	RD1/4PU153J
Q 704 (B,132,96) Transistor	DTC114TU	R 112 (A,152,49)	RD1/4PU153J
Q 951 (B,122,120) Transistor	DTA114EU	R 113 (A,166,101)	RD1/4PU561J
Q 952 (B,94,87) Transistor	2SB1188	R 114 (A,160,63)	RD1/4PU561J
Q 953 (B,94,96) Transistor	2SB1188	R 115 (A,173,119)	RD1/4PU561J
Q 956 (A,35,107) Transistor	FKV550N	R 116 (A,159,49)	RD1/4PU561J
Q 957 (A,35,125) Transistor	FKV550N	R 117 (B,169,105)	RS1/16S473J
Q 960 (A,34,39) Transistor	2SD2395	R 118 (B,167,56)	RS1/16S473J
Q 961 (A,34,24) Transistor	2SB1566	R 119 (B,166,122)	RS1/16S473J
D 601 (B,192,153) Diode	MA111	R 120 (B,169,37)	RS1/16S473J
D 602 (B,185,25) Diode	MA111	R 121 (A,166,109)	RD1/4PU151J
D 651 (B,171,151) Diode	MA111	R 122 (A,157,61)	RD1/4PU151J
D 652 (B,130,140) Diode	UDZS7R5(B)	R 123 (A,173,126)	RD1/4PU151J
D 653 (B,110,127) Diode	MA111	R 124 (A,156,52)	RD1/4PU151J
		R 125 (B,193,112)	RS1/16S101J

GM-3100T/XU/EW

A	====Circuit Symbol and No.===Part Name		Part No.
C	657	(A,138,101)	CEAT470M16
	658	(B,127,97)	CKSRYB103K50
	659	(A,124,124)	CEAT220M25
	660	(A,108,123)	CEAT471M16
	661	(B,127,90)	CKSRYB103K50
C	662	(B,138,71)	CKSRYB103K50
	701	(A,133,93)	CEAT220M25
	702	(B,146,100)	CKSRYB103K50
	703	(B,152,14)	CCSRCH680J50
	704	(B,162,18)	CCSRCH680J50
C	705	(B,130,73)	CKSQYB104K50
	801	(B,84,22)	CKSRYB471K50
	802	(B,109,28)	CKSRYB471K50
	803	(A,81,24)	CEAT100M50
	804	(A,110,32)	CEAT100M50
C	805	(B,56,11)	CKSRYB223K50
	806	(B,58,11)	CKSRYB223K50
	807	(B,88,24)	CCSRCH101J50
	808	(B,121,42)	CCSRCH101J50
	809	(B,97,30)	CCSRCH101J50
C	810	(B,124,37)	CCSRCH101J50
	811	(B,104,31)	CKSRYB103K50
	812	(B,111,41)	CKSRYB103K50
	831	(A,63,25)	CEAT100M50
	832	(A,63,18)	CEAT100M50
C	901	(A,88,159)	CFTNA224J50
	951	(A,123,114)	CEANP100M16
	952	(A,123,96)	CEAT221M16
	953	(B,117,91)	CKSRYB102K50
	954	(B,116,87)	CKSRYB103K50
C	955	(A,107,87)	CEAT101M16
	956	(A,40,153) 3900μF/16V	CCH1644(P35)
	958	(A,38,118)	CQMA472J50
	959	(A,47,138)	CQMA472J50
	960	(A,63,67)	CQMA102J50
C	961	(A,58,63)	CQMA102J50
	962	(A,67,82) 3600μF/35V	CCH1673(P35)
	963	(A,53,56) 3600μF/35V	CCH1673(P35)
	968	(A,74,37)	CEAT331M35
	969	(A,61,37)	CEAT331M35
C	970	(A,47,38)	CEAT100M50
	971	(A,48,14)	CEAT100M50
	972	(B,49,29)	CKSRYB473K50
	973	(B,43,24)	CKSRYB473K50
	974	(A,47,31)	CEAT470M16
C	975	(A,46,22)	CEAT470M16

6. ADJUSTMENT

There is no information to be shown in this chapter.

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● Removing the Case (Fig. 1)

- 1** Remove three black screws (M3 x 10).
- 2** Remove four white screws (M3 x 6).
- 3** Remove four black screws (M3 x 5).

Caution)

When you disassemble/re-assemble the Product with it placed upside down, take care not to damage the top surface.

The Product uses several different types of screws. Take care not to confuse them during re-assembly.

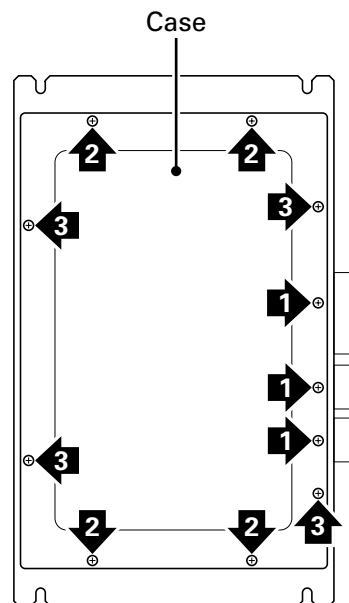


Fig. 1

● Removing the Panel (Fig. 2)

Panels are used for two sides individually, one for the RCA side and the other for the Power Terminal side.

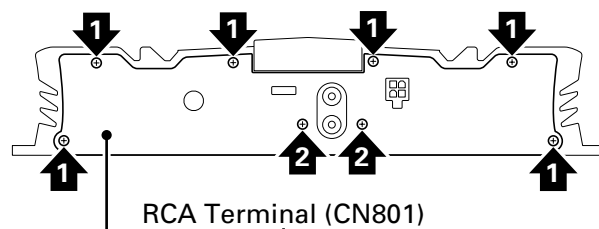
Panel for the RCA side

- 1** Remove six black screws (M3 x 8).
- 2** Remove two black screws (M3 x 5). (They are used to secure the RCA Holder.)

Panel for the Power Terminal side

- 3** Remove six black screws (M3 x 8).

Panel for the RCA side



RCA Terminal (CN801)

Panel for the Power Terminal side

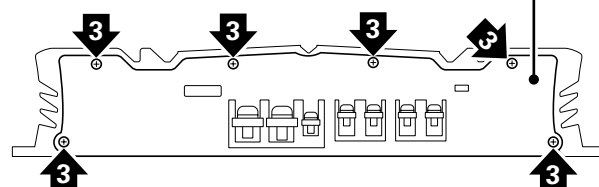


Fig. 2

● Removing the Amp Unit (Fig. 3)

- 1 Remove five black screws (M3 x 10).
- 2 Remove three white screws (M3 x 12).

➤ A Screw holes in the PCB are printed with numbers 1 to 8.

Remove screws in numerical order.

Re-assembly takes the reverse order of disassembly.

Caution)

The Amp Unit is adhered on the Heat Sink with silicon grease. This means forcibly removing the Amp Unit from the Heat Sink may break the PCB.

- 3 Remove all of the eight screws. Then, remove the two black screws (M3 x 5). Tighten screws whose length is M3 x 8 or more into the two screw holes so as to raise the Amp Unit above the Heat Sink. Then, remove the Amp Unit.
(Since screw threads differ, ➤ 1 and ➤ 2 screws cannot be used.)

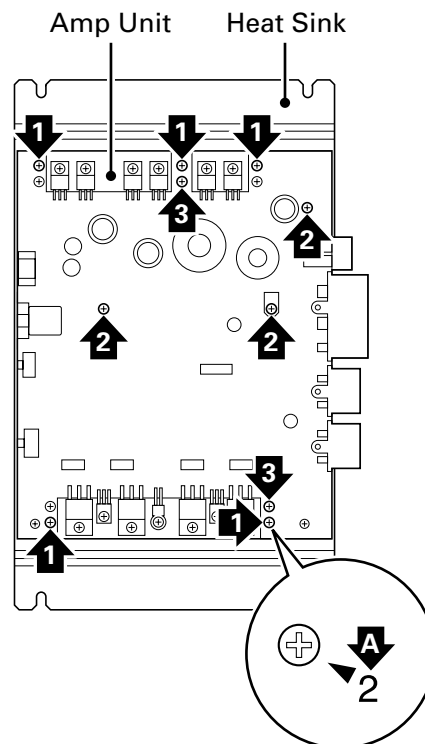


Fig. 3

● Caution when re-assembling the Amp Unit and the Heat Sink

Be aware that the RCA Terminal may break unless the Amp Unit and the Heat Sink are assembled following the correct procedures given below.

- 1) Secure the RCA-side Panel on the Heat Sink with screws. (Fig. 2)
- 2) Place the Amp Unit on the Heat Sink aligning with two studs. (Fig. 4)
- 3) Move the Amp Unit until the RCA Holder on the Amp Unit comes in contact with the inside of the Panel. (Fig. 4)

Caution in steps 2) and 3)

When you place the Amp Unit on the Heat Sink, you will find no positioning marks to determine the direction of two panels. To position them correctly, the Amp Unit needs to be moved to the place where it comes in contact with the RCA-side panel.

If you do not position them, an excessive force can be applied to the RCA Terminal. This may result in breakage.

- 4) Secure the RCA-side Panel and the RCA Holder with screws. (Fig. 2)
- 5) Secure the Amp Unit on the Heat Sink with screws. (Fig. 3)
- 6) Secure the Panel for the Power Terminal side in place with screws. (Fig. 2)

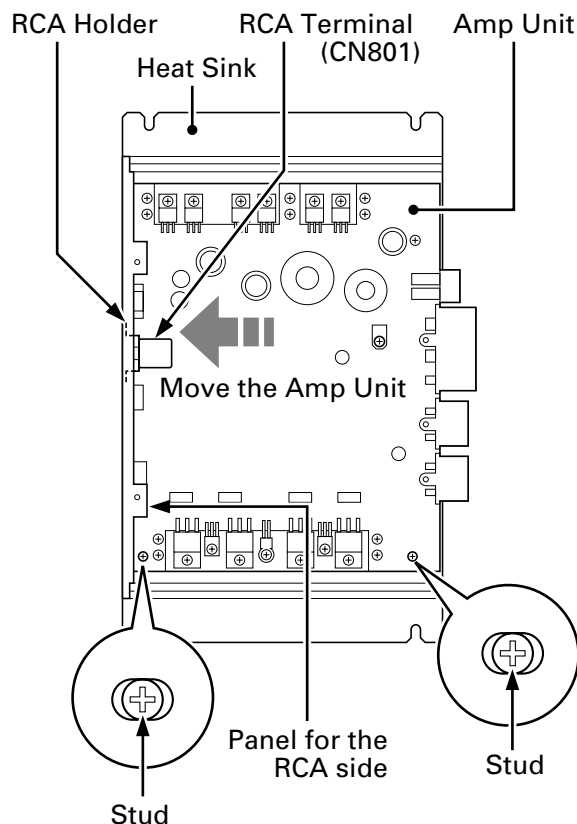
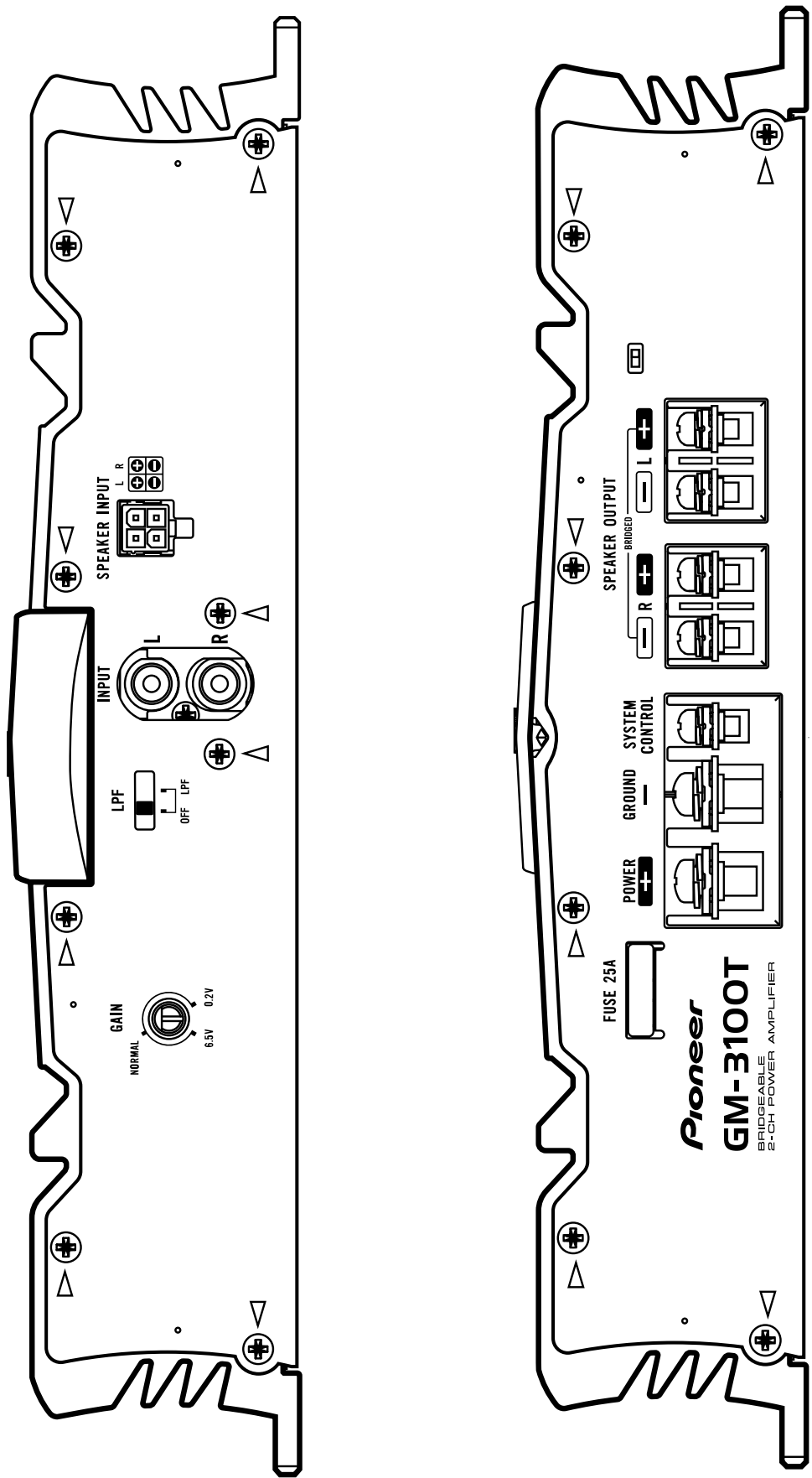


Fig. 4

7.1.2 CONNECTOR FUNCTION DESCRIPTION (GM-3100T/XU/EW)



A
B
C
D
E
F

8. OPERATIONS (GM-3100T/XU/EW)

BFC (Beat Frequency Control) Switch

If you hear a beat while listening to an MW/LW broadcast with your car stereo, change the BFC switch using a small standard tip screwdriver.

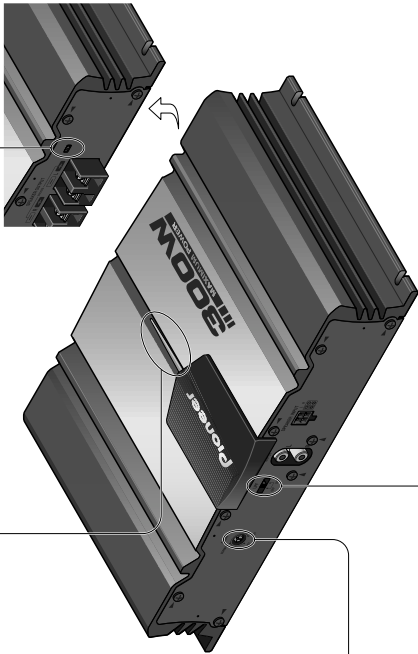
Power Indicator

The power indicator lights when the power is switched on.

Gain Control

If the sound level is too low, even when the volume of the car stereo used along with this power amplifier is turned up, turn gain control on the front of the power amplifier clockwise. If the sound distorts when the volume is turned up, turn the gain control counter-clockwise.

- When using with an RCA equipped car stereo (standard output of 500 mV), set to the NORMAL position. When using with an RCA equipped Pioneer car stereo with max. output of 4 V or more, adjust level to match the car stereo output level.
- If you hear too much noise when using the speaker input terminals, turn the gain control counter-clockwise.



LPF (Low-Pass Filter) Select Switch

Set the LPF select switch as follows according to the type of speaker that is connected to the speaker output connector and the car stereo system:

LPF Select Switch	Audio frequency range to be output	Speaker Type	Remarks
LPF (right)	Very Low Frequency range	Subwoofer	Connect a subwoofer.
OFF (left)	Full range		